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Snakes, Sunrises, and Shakespeare: How Evolution Shapes Our Loves and Fears (Review)

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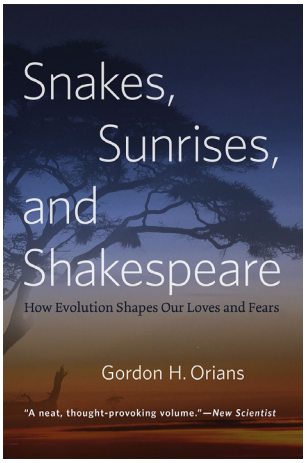

Snakes, Sunrises, and Shakespeare: How Evolution Shapes Our Loves and Fears

author: **Gordon H. Orians**

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reviewed by **Nancy Easterlin**

With so many general overviews of evolutionary psychology available already, readers might well ask what a new contribution to the market has to offer. In *Snakes, Sunrises, and Shakespeare*, Gordon H. Orians provides a valuable new perspective as a biologist and researcher in environmental aesthetics, suggesting how dynamic interactions with the environment might have influenced human psychology.

Orians unfolds his argument in eleven short, highly readable chapters. In chapter one, he identifies the book's central topic: human emotional responses to nature and their scientific explanations. Thus, he differentiates his argument from many within evolutionary psychology who foreground mating strategies and sex differences. He also likewise distinguishes his argument from those of first-generation cognitive psychologists, who sever cognitive processing from emotion. Chapter two identifies five categories central to hunter-gatherer life: shelter, safety, nourishment, friends, and contentment. Emotion, the main gear of motivation and the core of preferences and aversions, not only figures into each of these categories but also extends under the sense of beauty.

Chapters three and four, which focus on habitat selection and environmental aesthetics, particularly show the value of Orians's specific thesis that the "ghosts" of past environments

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inhabit us and orient our thinking. Evolutionary psychology and Darwinian literary studies typically focus on sexual selection and mating strategies, but Orians emphasizes that any organism capable of mating strategies must ascertain the safety and viability of its local surroundings before seeking mating opportunities. In his words,

> Survival depended on knowing those locations: Where were prey animals yesterday? Where did I cache the food I could not carry back to camp? Where are the trees with ripe fruit? Where are safe hiding places that I may need to use in an emergency? (page 28).

Habitat selection involves much more than a cursory inspection for available resources; it requires the observation of members of one's own and of other species, as well as recognition of "affordances," or opportunities for action.

Thus, Orians offers a dynamic model of thinking and emotion guided by evolved human objectives. Moreover, his ecological sketch of the human species includes geographer Jay Appleton's prospect-refuge theory, which postulates that preferences in landscape aesthetics are predicated on assessments of affordances. Later chapters extend this understanding to sensory modalities other than sight. For instance, noting that sound is a central feature of a habitat, Orians points out that even silent animal species (of which there are many) can detect sound. Nevertheless, though the conscious production of music probably derives from a basic aural sensitivity to the ambient environment, a theory of the origins of music must explain not only how it "benefited performers and listeners ... [but also] how music became so remarkably elaborated" (page 127). Orians then presents an overview of recent theories of music's origins.

At times, Orians presents evocative evidence but does not sufficiently connect it to the overarching scientific theory. His discussion of landscape manipulation is somewhat unclear in the context of prospect-refuge theory, which itself suggests that humans favor, for example, trees of certain height and shape to provide protective cover from both elements and predators as well as cliffs and hills that afford a superior view of the surroundings. Whereas prospect-refuge theory explains the wavelike raked patterns of Japanese gardens, it cannot satisfactorily explain the rationally patterned gardens of eighteenth-century Europe. Only late in the book does Orians note that such stylized gardens likely function as dominance displays. The likelihood that some aspects of garden design derive from sexual selection might have been woven into chapter four for a more unified treatment of landscape aesthetics and ornamental practices.

Despite the lovely alliterative title, Shakespeare—a metonomy for all literature here—gets short shrift, compared to the well-covered snakes and sunrises. This is not surprising: literary art is of extremely recent origin, dating back only a few thousand years, and it is also quite abstract. Because evolutionary social scientists spend little time pondering the special biocultural dynamics of this art form, those who choose to comment often produce ideas that are uninformative, given the complexity of literary production and consumption. Orians selects a better topic for his conclusion, exploring there how the "videophilia" of today's children results in what Richard Louv calls "nature deficit disorder." Orians argues that this loss of sensitivity to our environment is dangerous and unhealthy. I am grateful for Orians's insistence that we can all live better if we have an ecological understanding of our human past and its "ghosts," which continue to haunt us and our lives.

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- What made Stephanie Keep exclaim **Say What?** this time? The **Infuriating False Dichotomy** in science communication that you can be accurate or engaging, but not both. [Part 1 of 3: http://bit.ly/1qj0mTp]
- **Disrupting the Classroom:** Steve Newton on how self-styled "education reformers" always get it wrong. [Part 1 of 3: http://bit.ly/1Tb78bf]
- **"As Bill Nye would say..."** Glenn Branch on the *other* Bill Nye's puckish role in evolutionary thought. [http://bit.ly/1X8hckT]
- **Access to Scientific Papers is Priceless...**and yet pricey. Josh Rosenau advises teachers on how to avoid sticker shock. [http://bit.ly/1UZGMIv]
- Ann Reid applauds James Hansen for **Talking Climate Risks Without the Mute Button.** [http://bit.ly/1TbvUGn]
- **Glyptodonts Were Armadillos!** cries Stephanie Keep. Here's why to care. [http://bit.ly/27kQOZA]
- **Confusion, Indifference, and Compromise**: Josh Rosenau asks "How do we answer surveys when we don't know the answer?" [http://bit.ly/1TTafBt]
- Guest blogger Eileen Hynes tells us what it's like having a scientist visit her classroom in **A Fishy and Fun Tale.** [http://bit.ly/1rKNqXB]
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